



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

*[Signature]*

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/538,522	06/10/2005	Michael Ganser	21295.0106US1 (E0664US)	3557
29127	7590	09/08/2006		EXAMINER
HOUSTON ELISEEVA 4 MILITIA DRIVE, SUITE 4 LEXINGTON, MA 02421			STEPHENS, SCOTT H	
			ART UNIT	PAPER NUMBER
			2872	

DATE MAILED: 09/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No.	Applicant(s)
	10/538,522	GANSER ET AL.
	Examiner Scott H. Stephens	Art Unit 2872

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 24 July 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-16 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on 6/10/05 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
  1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |   |  |
|---|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                    | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)              |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____. | 6) <input type="checkbox"/> Other: _____.  |

## DETAILED ACTION

### *Drawings*

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "Fourier plane" recited in line 7 of claim 1 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

### ***Claim Objections***

Claim 1 is objected to because of the following informalities: Line 5 recites "an imaging optics". Examiner suggests amending the claim to read either "an-imaging optics" or "an imaging optics". Appropriate correction is required.

Claim 1 is further objected to for not properly displaying amended limitations. Specifically, amended limitations "the lens having a pupil plane" (line 4), and "by being a Fourier plane of the pupil plane of the lens" (line 7) should be underlined. Appropriate correction is required . See MPEP 7.14:

(B) > Markings to Show the Changes:< All claims being currently amended must be presented with markings to indicate the changes that have been made relative to the immediate prior version. The changes in any amended claim must be shown by strike-through (for deleted matter) or underlining (for added matter) with 2 exceptions: (1) for deletion of five or fewer consecutive characters, double brackets may be used (e.g., [[eroor]]); (2) if strike-through cannot be easily perceived (e.g., deletion of number "4" or certain punctuation marks), double brackets must be used (e.g., [[4]]). As an alternative to using double brackets, however, extra portions of text may be included before and after text being deleted, all in strike-through, followed by including and underlining the extra text with the desired change (e.g., number-4 as number 14 as). An accompanying clean version is not required and should not be presented. Only claims of the status "currently amended" or "withdrawn" will include markings.  
> Any claims added by amendment must be indicated as "new" and the text of the claim must not be underlined.<

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 5, 6, and 16, are rejected under 35 U.S.C. 102(e) as being disclosed by Kawano (US 2003/0058530)

Regarding claim 1, Kawano discloses a reflected-light microscope comprising a light source (20) serving to generate an illumination light beam that can be directed through a lens (1 or 4) along an illumination beam path and onto a sample (S), the lens having a pupil plane (paragraph 30); imaging optics (6) disposed along the illumination beam path and having a focal plane which optically corresponds to the pupil plane by being a Fourier plane of the pupil plane of the lens (paragraphs 30 and 48) and, at least one attenuation element (13) disposed in the focal plane of the imaging optics (paragraph 48) along the illumination beam path over an entire cross-section of the illumination light beam (fig. 4).

Regarding claim 5, the lithography limitation of claim 5 is a product-by-process limitation and thus is not given significant patentable weight. In product-by-process claims, “once a product appearing to be substantially identical is found and a 35 U.S.C. 102/103 rejection [is] made, the burden shifts to the applicant to show an unobvious difference.” MPEP 2113. This rejection under 35 U.S.C. 102/103 is proper because the “patentability of a product does not depend on its method of production.” In re Thorpe, 227 USPQ 964, 966 (Fed. Cir. 1985).

Regarding claim 6, Kawano discloses at least one attenuation element arranged in a storage mechanism (paragraph 49).

Regarding claim 16, Kawano further teaches, that the reflected-light microscope is a fluorescence microscope (see abstract).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3, 7-11, and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano (US 2003/0058530).

The embodiment of Kawano discussed above lacks specific mention of a filter wheel. However, Kawano teaches in other embodiments, a filter wheel storage mechanism (fig. 5) comprising: (claim 3) at least one attenuation element that is a color filter (paragraph 55), (claim 7) wherein the storage unit to be a rotatable turret (paragraph 35), (claim 8) wherein the storage mechanism holds several attenuation elements that exhibit different degrees of attenuation (paragraph 35 – band-pass filters, frosted glass, or a shutter all provide different degrees of attenuation), (claims 9 and 10) wherein the storage mechanism exhibits a neutral (shutter discussed in paragraph 35) that permits the illumination light beam to pass through without being attenuated and blocking position that blocks the illumination path (shutter discussed in paragraph 35), (claim 11) wherein a drive mechanism that controls the storage mechanism (paragraph 35 and 73), and (claim 13) a control mechanism (32) that controls the drive mechanism.

At the time of invention, it would have been obvious to one of ordinary skill in the art to modify the embodiment of Kawano to use the filter wheel as an attenuation element. The motivation for doing this would have been to allow automatic insertion of plural attenuation elements as suggested by Kawano in paragraphs 49 and 73.

Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano (US 2003/0058530) in view of Ebbesen (US 6052238).

Regarding claim 2, although Kawano states that desired filters can be inserted and removed (paragraph 49) into a storage mechanism, Kawano lacks specific mention of inserting an attenuation element that exhibits a grate, sieve, or pinhole structure.

Ebbesen teaches a microscope with filters comprising a grate structure (col. 2, lines 38-41) and further teaches that these filters are well known (col. 2, lines 47-52). At the time of invention, it would have been obvious to one of ordinary skill in the art to insert Ebbesen's well-known grate structure filters into Kawano's storage mechanism. The motivation for doing this would have been filter IR light as suggested by Ebbesen (col. 2, lines 38-52).

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano (US 2003/0058530) in view of Bourdelais et al. (US 2004/0027672).

Although Kawano states that desired filters can be inserted and removed (paragraph 49) into a storage mechanism, he lacks specific mention of inserting an attenuation element that exhibits a diffusion disk.

Bourdelaïs teaches an attenuation element that is a diffusion disk (paragraph 59) which can be used in a microscope (paragraph 120). At the time of invention, it would have been obvious to one of ordinary skill in the art to insert Bourdelaïs' diffusion disk into Kawano's storage mechanism. The motivation for doing this would have been to yield a homogeneous illumination field as suggested by Bourdelaïs (paragraph 120).

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano (US 2003/0058530) as applied to claim 11 above, and further in view of Fay et al. (US 5,009,488).

Although Kawano teaches a driving element for a filter turret (paragraph 35 and 73), he is silent on the driving element being a stepping motor.

Fay teaches a drive mechanism that comprises a stepping motor (col. 4 lines 6). At the time of invention, it would have been obvious to one of ordinary skill in the art to include Fay's stepping motor in Kawano's driving element. The motivation for doing this would have been to assist in the precise rotation of the storage mechanism.

Claims 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kawano (US 2003/0058530) in view of the applicant's admission of prior art and Watanabe et al. (US 6,384,967).

Although Kawano teaches a controller interfaced with multiple driving elements of a microscope, he is silent on light being automatically blocked when an optical element is being exchanged.

However this automation is known. Evidence of this is provided in the prior art disclosed in the instant application (page 2 or the specification), wherein is disclosed at least one exchangeable optical element (page 2, lines 12-13) is arranged in the illumination beam path, in which case the illumination light beam is automatically attenuated or blocked while the optical element is being exchanged (page 2, lines 14-15).

Therefore, at the time of invention, it would have been obvious to one of ordinary skill in the art to program Kawano's controller to provide the automation disclosed in the description of prior art. The motivation for doing this would have been to prevent an undesirable amount of light from being directed into the objective lens as suggested by Watanabe (see abstract).

### ***Response to Arguments***

Applicant's arguments with respect to claims 1 have been considered but are moot in view of the new ground(s) of rejection.

### ***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Scott H. Stephens whose telephone number is 571-272-3113. The examiner can normally be reached on Monday-Friday 7:30am - 4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Drew Dunn can be reached on 571-272-2312. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Scott Stephens  
Tuesday, September 05, 2006

SHS

  
MARK A. ROBINSON  
PRIMARY EXAMINER